TURKEY

COUNTRY PROFILE

**IMPLEMENTATION OF AGENDA 21:
REVIEW OF PROGRESS MADE SINCE THE
UNITED NATIONS CONFERENCE ON
ENVIRONMENT AND DEVELOPMENT, 1992**

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The Information contained in this Country Profile is also available on the World Wide Web, as follows:
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TURKEY

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All statistics are rendered as provided by the respective Governments.

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ACRONYMS

APELL	Awareness and Preparedness for Emergencies at Local Level
CFC	chlorofluorocarbon
CGIAR	Consultative Group on International Agriculture Research
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
EEZ	exclusive economic zone
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ELCI	Environmental Liaison Centre International
EMINWA	environmentally sound management of inland water
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GEMS/WATER	Global Water Quality Monitoring Programme
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution
GIPME	Global Investigation of Pollution in Marine Environment (UNESCO)
GIS	Geographical Information System
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
GSP	generalized system of preferences
HIV	human immunodeficiency virus
IAEA	International Atomic Energy Agency
IAP-WASAD	International Action Programme on Water and Sustainable Agricultural Development
IARC	International Agency for Research on Cancer
IBSRAM	International Board of Soil Resources and Management
ICCA	International Council of Chemical Associations
ICES	International Council for the Exploration of the Sea
ICPIC	International Cleaner Production Information Clearing House
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
IEEA	Integrated environmental and economic accounting
IFAD	International Fund for Agricultural Development
IGADD	Intergovernmental Authority for Drought and Development
IGBP	International Geosphere-Biosphere Programme (ICSU)
IGBP/START	International Geosphere-Biosphere Programme/Global Change System for Analysis, Research and Training
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organization
INFOTERRA	International Environment Information system (UNEP)
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	integrated pest management
IRPTC	International Register of Potentially Toxic Chemicals
ITC	International Tin Council
ITTO	International Tropical Timber Organization

ACRONYMS (Cont'd)

IUCN	International Union for Conservation of Nature and Natural Resources
MARPOL	International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PGRFA	plant genetic resources for agriculture
PIC	prior informed consent procedure
SADCC	South African Development Co-ordination Conference
SARD	sustainable agriculture and rural development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNU	United Nations University
WCP	World Climate Programme (WMO/UNEP/ICSU/UNESCO)
WFC	World Food Council
WHO	World Health Organization
WMO	World Meteorological Organization
WWF	World Wide Fund for Nature (also called World Wildlife Fund)
WWW	World Weather Watch (WMO)

OVERVIEW

Social Developments:

The total population of Turkey reached 62.7 million in 1996. The annual population growth fell from 2.17 to 1.78 in 1996. The total fertility rate, which was estimated as 3.4 in the period of 1985-1990, dropped to 2.69 in 1994. Infant mortality rate is 42.2 (in thousand) in 1996. Life expectancy at birth for males is 65.9 and, for females, 70.5. The total life expectancy is 68.2 for the year 1996.

The educational level of the country's population is still insufficient. The total literacy rate is 80.5%, with 88.8% for males and 72% for the female population. For the same period of time, the schooling rates are 5.1% in pre-school education for the 4-6- year-old age group, 100% in primary schools, 65.6% in junior high schools, 53% in high schools and 26.7% in higher education, including 12.5% in formal higher education. When comparing schooling rates according to gender, there is a significant difference between the male and female population.

According to the 1990 Population Census, 55.26% of the eligible male population and 59.6% of the eligible female population is in primary school. In junior high, the rate is 10.85% for males and 7.57% for females. In high school, the percentages shift to 10.74% of the males and 8.28% of the females, and, in higher education, 4.47% of the eligible male populationis enrolled as compared to 2.57% of the female population.

The basic health indicators such as infant mortality, child mortality below the age of 5, mother mortality, and immunization rate have not improved sufficiently. This insufficiency stems not only from the problems concerning the health sector, but also from factors such as the environment, nutrition, housing, distribution of income, provision of clean drinking water and water for use. The total fertility rate in 1973 was 5.5%; in 1978, it was 4.3%; in 1983, 4.1%; in 1988, 3.4%, and in 1993, 2.7%. The total mortality rate dropped to 6.5 (in one thousand) in 1990 from 11.6 (in one thousand) in 1970. The mother mortality rate presists as a problem; in 1970 it was 2,084 out of one hundred thousand; in 1981 it was 132, and the projection of mother's mortality for now is between 40-60 in one hundred thousand.

The unemployment rate went up to 10.5% in 1994. Similarly , the level of underemployment reached 9.3%. In urban areas, the unemployment rate among educated young people is high, whereas the proportion of women in the labour force is low. Employment in the agricultural sector with low-productivity continues to account for over 45% of the total employment, which is about 20.4 million. Employment in the public sector, which makes up 40% of the total paid employment, remained the same in the period of 1991-1995.

Salaries and wages have increased at high rates in real terms in the period of 1990-1994. Wages of workers in the public sector have increased by a factor of 2.04, whereas in the private sector they increased by 1.5. During this period, policies were implemented for improving income distribution, and the share of wage and salary-earners in the GDP was raised.

Due to a high urbanization rate, infrastructure and superstructure investments in the cities continue to be inadequate in meeting the needs of the increasing population. Housing problem arising in line with the population, and migration and high urbanization continue to prevail.

The social security institutions in Turkey have increasing financial problems. The imbalance between the active and passive insurers requires organizational changes.

The removal of bottlenecks encountered in the continuous and effective provision of family planning services for the groups who need them, in ensuring cooperation among the sectors concerned and in education and proper employment of the personnel, is of great importance.

Economic Developments

The main objectives of the Sixth Five-Year Development Plan (1991-1995) have been implemented, including speeding up of the industrial growth, bringing down the chronic inflation rate, increasing the role of the private sector, giving priority to investments in resources allocation, all within a structure open to international competition. The functions of the state to set and supervise rules with regard to the realization of economic activities through market mechanisms in order to raise welfare were the other objectives during that period. But the country was not ready to withdraw the state from economic activities, such as production and distribution.

The increase in domestic interest rates and the mounting public deficits have speeded up the inflow of hot-money and led to excessive appreciation of the Turkish lira in real terms. Together with this development, the real increase in labour costs and the decrease in direct and indirect incentives have caused the Turkish economy to lose its competitiveness. The rapidly deteriorating internal and external balances caused a serious crisis in money, capital and exchange markets in the early 1994. Because of this development, on April 5, 1994, the Economic Measures Implementation Plan was put into effect with a view to stabilizing the economy.

OVERVIEW (Cont'd)

In the 1990-1993 period, the GNP growth rate reached an average of 6% annually, but in an unstable manner. During the same period, high public deficits and the expansion in domestic demand backed up by an inflow of short-term capital, formed a driving force for growth. As a result of the stability measures, the GNP at fixed prices decreased by 6% in 1994. As a result, the ratio of public sector borrowing to GNP, which rose to 11.7% in 1993, came down to 8.2% . Thus, in the Sixth Plan Period, fixed GNP grew by an average of 3.5 percent annually. In 1990-1993, the average price increase was about 60%.

In conclusion, the developments during the Sixth Plan period made it clear that the consumption-based growth, backed by public sector deficits and short-term capital inflow, is not sustainable. They underlined the need for implementing monetary and fiscal policies in harmony with each other, as well as the importance of developing the domestic macro policies in the context of an international economic environment characterised by liberalisation of foreign trade and capital movements.

Forests:

The First Forestry Assembly was held in 1993. Decisions were taken on the following topics: forestry legislation, reforestation and erosion control, national parks and wildlife, forestry and forest villagers, institutional strengthening, extension issues, international relations, conservation, planning and management of forests, forest products, forest cadastral studies, ownership status of forests, forests and the environment.

Turkey has signed and adopted the reolutions taken at the Strasbourg and Helsinki Ministerial Conferences on the Protection of Forests in Europe, and established a National Follw-up Committee consisting of experts responsible for technical coordination of each resolution. Necessary studies on adjusting the accepted criteria and indicators for sustainable forest management to national forestry issues are being conducted.

Two important laws on forestry issues have entered into force: 1) The Law on National Mobilisation for Afforestation, Reforestation and Erosion Control, and 2) The Law on the Development of Forest Villagets.

The interest rates of credits given to support forest villagers have been reduced, and new legal and financial arrangements have been undertaken to encourage the private sector and farmers to be involved in and contribute to plantation activities.

The National Environmental Action Plan and Action Plan for Biological Diversity have been prepared and submitted to related agencies for Approval.

Turkey signed the United Nations Convention on Biological Diversity in 1992 and ratified it in 1997. The Convention on Combating Desertification was signed in 1994 and the ratification process is underway.

Three international symposiums, namely 1) for cedrus libani; 2) pinus brutia; and 3) in-situ conservation of plant genetic resources have been organised since UNCED. In addition, the Second Expert Level Follow-up Meeting of the Helsinki Ministerial Conference was held in Turkey in 1995.

FACT SHEET

TURKEY

1. Name of Key National Sustainable Development Coordination Mechanism(s)/Council(s).

No information.

Contact point (Name, Title, Office):

Telephone: **Fax:** **e-mail:**

Mailing address:

2. Membership/Composition/Chairperson:

2a. List of ministries and agencies involved:

2b. Names of para-statal bodies and institutions involved, as well as participating of academic and private sector bodies:

2c. Names of non-governmental organizations involved:

3. Mandate role of above mechanism/council:

4. If available, attach a diagram (organization chart) showing national coordination structure and linkages between ministries:

TURKEY

AGENDA 21 CHAPTER 2: **INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES (with special emphasis on TRADE)**

NATIONAL PRIORITY:	
STATUS REPORT: Turkey passed the Agreement of the WTO and its annexes on January 26 1995, which brings new standards on trade and environment. Turkey is a member of the Organization of the Islamic Conference (OIC) and the Committee for Economic and Commercial Cooperation of the Organization of the Islamic Conference (COMCEC). Turkey is member of the Black Sea Economic Cooperation in the framework of which trade and environment relations among member countries are also promoted.	

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS					

AGENDA 21 CHAPTER 3: COMBATING POVERTY

NATIONAL PRIORITY:

STATUS REPORT: While abject poverty (defined as pervasive poverty below biological or nutritional standards) may not be a problem in Turkey, extensive relative poverty is, and the number of poor with less than adequate nutrition, housing and health standards has been increasing in recent years.

The relatively low income of the rural population is the main cause for regional and urban-rural disparities in Turkey. It is estimated that 68.7% of the poor households are rural. Most of the poor are from the East and Southeast Anatolia (30.3%), whereas only 1.4% from the Aegean-Marmara region. About 70% of the poor earn their living from agriculture. The Government agricultural product subsidies and tax exemptions are insufficient to alleviate the disparities. In addition to agriculture, a large number of the poor are found in small family enterprises. Since there is no persistent long-term basis for rural development, the difference in the level of welfare between the rural and urban areas is gradually increasing, and the migration of the rural population into big cities is leading to excessive aggregation, increased unemployment and problems with regard to settlement, housing, environment, infrastructure, transportation, education, health and public security.

• Focus of national strategy

As stated in the Seventh Five-Year Development Plan (1996-2000), Turkey's national strategy to combat poverty is as follows:

- Achieving a fair income distribution and improving social welfare are the main objectives.
- In economic and social policies, taking account of the economic efficiency criteria, the alleviation of poverty and imbalances in income distribution together with the improvements in social welfare will be given priority.
- The Social Aid and Solidarity Promotion Fund will be reorganized to effectively improve the welfare of social groups living below the povrty line.
- The social security system will be extended so as to cover the whole population.
- In agriculture, income distribution will be improved through direct cash grants to registered small farmers.
- An unemployment insurance scheme will be established through which all residents will be insured, and the premium requirements of those who cannot afford it will be met by the State.

• Highlight activities aimed at the poor and linkages to the environment

Within the framework of a sustainable development approach, the integration of environmental policies into all social and economic policies has gained an importance.

It is rather a global phenomenon that poverty steadily grows and deepens. (According to various analyses of the United Nations , some 1.1 billion people, half of whom live in extreme poverty, are defined as "poor", as pointed out during the World Summit for Social Development in Copenhagen in 1995.) Turkey is not an exception to this actual and historical fact. The lack of sufficient housing, which is both a basic need and a very important consumption item for human well-being, reflects the extent of poverty which many socio-economic groups experience. "Gecekondu", which is the Turkish version of squatter housing seen in every developing country, providing shelter for the urban poor and "have-nots" in and around especially big cities (metropolises), invades more and more rural (agricultural) lands every day. Of the estimated total urban population of 37.8 million (i.e. 60.9% of the total population) in 1995, nearly a quarter still lives in genekondu-type settlements. Although important provisions have been made for planning, housing and services, including legal efforts such as the "Gecekondu Law, No: 775." of 1966 and the "Gecekondu Amnesty Law, No: 2981," of 1984, the sheer number of gecekondu has risen up from an estimated 240,000 during the First Five-Year Development Plan (1963-1967) to an estimated 2,000,000 at the beginning of the Seventh Five-Year Development Plan (1996-2000). New types of housing have been introduced, including the 1980s-like "mass housing" scheme which provids for credits to housing cooperatives through the newly established "Housing Development Administration" and the "Mass Housing Fund" (1984), the formation of gecekondus has not been stopped due both to scarcity of national financial resources and to the rising poverty levels.

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS							
	1985	1987	1990	1992	1994	Latest 1996	
Unemployment (%)	11.2	-	7.4	7.9	8.1	7,4	
Population living in absolute poverty		14.24	15.0	15.8	16.1	-	
Public spending on social sector %	-	-	-	-	-	-	
Other data							

AGENDA 21 CHAPTER 4: CHANGING CONSUMPTION PATTERNS

NATIONAL PRIORITY:

STATUS REPORT:

• National policy objectives/focus

A national policy discussion on changing production and consumption patterns was held in Turkey in 1993, together with the governmental authorities, consumer groups, NGOs at large, the media and the National Standardization Body. The importance of product standards, the adoption of a national scheme for an environmental quality management system and public awareness-raising were stressed as the means to achieve the objectives of Chapter 4. On the basis of the discussion, the Directorate General for the Protection of Consumers and Competition was set up in the Ministry of Industry and Trade, and the Act on the Protection of Competition, as well as several regulations on consumer protection, were adopted.

The Ministry of Environment has signed declarations and protocols with different sectors of the economy to decrease their environmentally harmful loads. For example, a declaration was signed with the Cement Industry Union whereby the cement industry representatives made a firm promise to decrease and control the environmental pollution produced by this sector. In 1995, production of cars equipped with catalytic converters was initiated with a protocol between the Ministry of Environment and the car manufacturers.

Arrangements which have been made by taking into consideration the protection of the environment, in order to settle the issues on guarantee, maintenance and repair services assuring reliability of all kinds of goods used by the consumers, are still inadequate. The need for the harmonization of product standards with the European Community still persists.

National targets No information.

Cross-Sectoral Issues

1. **Decision-Making Structure:** See status report.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

	1985	1990	1992	Latest 1995	
GDP per capita (current US$)	1,347	2,679	2,647	2,755	
Real GDP growth (%)	4.5	9.1	5.5	7.2	
Annual energy consumption per capita (Kg. of oil equivalent per capita)	711	736	731		
Motor vehicles in use per 1000 inhabitants	27.2	37.5	52.1		
Other data					

Government policies affecting consumption and production.

1. Goals and Agents (Stakeholders)

Indicate with a (X) those agents which your Governments policies are meant most to influence.

Agents / Goals	Producers	Local authorities	Central Government	Households	Civil society
Material efficiency	X		X		
Energy efficiency:	X		X		
Transport	X		X		
Housing	X		X		
Other	X		X		
Waste:	X		X		
Reduce	X		X		
Reuse	X		X		
Recycle	X		X		

Comments:

2. Means & Measures and Agents (Stakeholders)

Indicate with an (R) those agents who assume primary responsibility for any of the policy measures indicated; indicate with an (I) the agents for which the impact is expected to be especially significant.

Means & Measures / Agents	Producers	Local authorities	Central Government	House-holds	Civil Society
Improving understanding and analysis	I	I	R		I
Information and education (e.g., radio/TV/press)			R		I
Research			R		
Evaluating environmental claims			R		
Form partnerships			R		
Applying tools for modifying behaviour	I		R		
Community based strategies			R		
Social incentives/disincentives (e.g., ecolabelling)			R		
Regulatory instruments	R		R		
Economic incentives/disincentives			R		
Voluntary agreements of producer responsibility for aspects of product life cycle			R		
Provision of enabling facilities and infrastructure (e.g., transportation alternatives, recycling)			R		
Procurement policy			R		
Monitoring, evaluating and reviewing performance		I	R		
Action campaign		I			
Other (specify)					

Comments:

AGENDA 21 CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

NATIONAL PRIORITY:	
STATUS REPORT: The high population growth rate, which now stands at over 2% per year, and the high maternal and infant mortality rate, call for further investments in the national population policies. According to the national statistics, ninety-three precent of the total population is covered by national social security schemes. Private social security schemes have been encouraged to expand these services to the whole population. The 6th and 7th Five-Year Development Plans have identified targets and implementation strategies for the establishment of wide-coverage unemployment insurance schemes, creating a skilled labour force, and upgrading the existing employment benefit systems. In addition, the interlinkages between demographic and environmental issues have been given a priority in the national five-year development plan.	

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of Interior, the State Institute of Statistics (SIS), Hacettepe University and the Institute of Demographic Studies are primarily responsible for demographic issues in Turkey. In addition, the Ministry of Agriculture, the Ministry of Environment, the Ministry of Forest, the State Planning Organization (SPO) and the State Institute of Statistics are engaged in integrated policy coordination in the field of population, environment and development. A Demographic Dynamics and Sustainability Working Group has been set up under the National Environmental Action Plan (NEAP) to coordinate the different actions in the field of population, environment and sustainable development.

2. Capacity-Building/Technology Issues: No information.

3. Major Groups: No information.

4. Finance: No information.

5. Regional/International Cooperation: No information.

STATISTICAL DATA/INDICATORS

	1990	1993	Latest 1996	
Population (Thousands) mid-year estimates	56,098	60,227	62.7	
Annual rate of increase (1990-1993)		2.4	2.17	
Surface area (Km^2)		774,815	774	
Population density (people/Km^2)		78	81	
Other data				

AGENDA 21 CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH

NATIONAL PRIORITY:	
STATUS REPORT: Market growth and urbanization of the Turkish population over the past two decades have had a major impact on the health status and on the disease patterns throughout the country. Investments in health, education and poverty alleviation have led to the improvement of overall health in Turkey. Better education, especially for women and girls, has increased the population's understanding of the leading threats to good health, the ability to care for their families, and the probability that they will seek appropriate access to health services. In addition, the number of doctors, nurses, clinics and hospitals has increased. A better supply of food, clean water, safe sanitation, decent housing and basic education is now available to most of the people, although regional and urban-rural disparities still exist among the country's 60 million population.	

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** The second Health Project financed by a World Bank loan and availing of management services assistance through the UNDP will help to improve the effectiveness, efficiency and equity of the 4.6% of GNP (US$ 98 per capita per year) currently consumed by the health sector in Turkey.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

	1980	1990	1994	1995	Latest 1996
Life expectancy at birth			67.7	67.9	68.2
Male	58	62.8	65.4	65.7	65.9
Female	62.5	68	70	70.3	70.5
Infant mortality (per 1000 live births)	120	68	46.8	44.4	42.2
Maternal mortality rate (per 100000 live births)		150*	N.A.		
Access to safe drinking water (% of population)					
Access to sanitation services (% of population)					

Other data

* 1980 - 1991

AGENDA 21 CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

NATIONAL PRIORITY:

STATUS REPORT: The ever increasing population living in cities and the urban-rural disparity have become the top priority issues in Turkey. Among others, increasing housing demand and traffic problems result from this phenomenon. Due partially to the insufficient supply of serviced land for housing within or around the city, there has been an extreme increase in unlicensed (illegal) housing, often without even the most basic amenities. Insufficient land supply and the lack of viable investment alternatives in the Turkish economy in general have given rise to speculative investments in the real estate markets, making it even more difficult for the low-income households to attain homes. Financing of housing, primarily by individual savings, is another aspect of the problem.

Local authorities are under pressure for the increased service requirements, ranging from the disposal of immense amounts of solid wastes to the provisions of parks and play areas. Due to their financial dependency on the central government and legislation limiting their capacity in decision-making, the local authorities in Turkey are unable to provide these services at the required level.

The Government of Turkey had a dual role in its preparatory work for the Habitat II Conference. As the host country , Turkey was responsible for all the necessary arrangements for the conference. On the other hand, Turkey prepared, in close cooperation with a considerable number of public agencies and NGOs, a National Plan of Action. It is based on an enabling strategy, addressing the issues of human settlements in both urban and rural areas, including the assessments of shelter, infrastructure and service needs, the review of the effectiveness of existing urban policies and the identification of issues and bottlenecks to local development that call for action. Issues pertaining to poverty alleviation and job creation, pollution reduction and environmental improvement as well as community participation and new modes of governance are also addressed in the Plan.

In addition to what has been said in Ch.3 above, the financial bottleneck existing for the poor people wanting to attain homes in cities can be emphasised by giving some figures obtained from practical experiences of housing cooperatives producing licensed housing: As of today, each fourth completed housing unit in Turkey is realized by cooperatives. Since the great initial public push created in 1984, housing cooperatives' financial crediting power has diminished from a fixed percentage rate of 83 to below 30% in 1995. And while the inflation level has prompted the prices of construction materials to grow 154 times (within the same time period of 11 years), the housing co-operatives' credit allowances have grown only 55 times. So the number of poor people in housing cooperatives has steadily been falling during the last decade, a fact contributing to the increase in slum construction and figures.

Apart from this, land is a very limited resource. Sixty-three percent of Turkey is affected by soil erosion. In addition, 92% of the total land area and 95% of the total population are under the risk of medium to high level seismic movements.

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of the Interior and the Ministry of Public Works and Settlement are responsible for decision-making under this chapter. See also capacity-building.

With regard to legislation in this field, the (City) Planning Law, No: 3194/1985; the Gecekondu (Squatter Housing) Law, No: 775/1966; the Mass Housing Law, No: 2985/1984 and the Public Housing Law, No: 2946/1983 are the main laws governing housing policies in Turkey.

2. Capacity-Building/Technology Issues: A technical cooperation project to promote sustainable human settlement development was initiated in October 1994, between the Government of Turkey and the UNDP, and it is being executed and financed (US$ 1.6 million) by the Prime Ministry Housing Development Administration.

3. Major Groups: See status report.

4. Finance: No information.

5. Regional/International Cooperation: No information.

STATISTICAL DATA/INDICATORS

	1990	1995	
Urban population in % of total population	60.9	68.8	
Annual rate of growth of urban population (%)	5.2	4.4	
Largest city population (in % of total population)	11.6	12.6	
Other data			

AGENDA 21 CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

(See pages vii and viii at the beginning of the profile)

NATIONAL PRIORITY:

STATUS REPORT: Turkey has a National Environmental Action Plan (NEAP) for the years 1996-2000. It is a binding document to the public sector and serves as a guidance document to the private sector. In addition, certain sectors such as tourism, industry, energy, transport and agriculture are working for the integration of environmental considerations into this work.

In 1995, Turkey launched a preparatory process for the development of a National Agenda 21 under the UNDP technical cooperation programme entitled the National Programme for Environmental Institution and Management in Turkey. The final product is expected to be a consensus document which will identify actions to ensure the integration of social, environmental and economic concerns and policies at all levels. The NEAP and the Seventh Five-Year Development Plan (1996-2000) are used as an important reference in the formulation of the National Agenda 21.

As part of the preparations, Agenda 21 was translated into Turkish, and a Task Force, with representatives from the Ministry of Environment, State Planning Organization, NGO's, academic institutions, local authorities, private sector and the UNDP was established to lead the preparatory work. A National Committee involving representatives from all relevant government agencies, NGOs, local authorities, academic institutions, private sector and the media has also been set up to draft the action plan, and regional workshops have been organized to review the drafts.

Environmental impact assessment became a legally required procedure on 7 February 1993, and it is currently under revision.

Cross-Sectoral Issues

1. **Decision-Making Structure (please also refer to the fact sheet):** See status report and Chapter 40.

2. **Capacity-Building/Technology Issues:** See status report.

3. **Major Groups:** See status report.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

AGENDA 21 CHAPTER 9: PROTECTION OF THE ATMOSPHERE

NATIONAL PRIORITY:

STATUS REPORT:

The Montreal Protocol and its Amendments

Montreal Protocol signed in 1991;

London Amendment signed in 1995;

Copengahen Amendment signed in 1995.

The latest report to the Montreal Protocol Secretariat was prepared in 1996.

United Nations Framework Convention on Climate Change

No immediate plans to ratify the UNFCCC.

Additional comments relevant to this chapter : In order to protect the atmosphere, the Government of Turkey promotes policies and programmes in the areas of energy efficiency (UN, EE 2000), environmentally sound and efficient transportation (EC, EURO 93), industrial pollution control, sound management of marine resources, and management of toxic and other hazardous waste. Studies on air pollution have been carried out by Turkish universities. The most important of these studies are the following: Monitoring of Heavy Metal Pollution of Traffic Origin in Eskisehir, Atmospheric Lead Pollution in Ankara, Chemical Composition of Atmospheric Aerosols in Rural Sites of North-West Anatolia.

Turkey does not participate in the strengthening of the Global Climate Observing System because the national capacity to predict the effects of emissions on the climate or to develop methodologies to identify threshold levels of greenhouse gases is poor. Observations of transport emissions are selective and limited. Currently, there are 73 settlements and 76 provincial centers to monitor the levels of suspended particles and SO_2. In 1993, a Transboundary Air Pollution Station was established in Cubuk, near Ankara, and the Government promotes exchange of information in this respect both at the national and international levels.

In order to have a less polluting and safer transport system, Turkey stresses the importance of EIA. Safety aspects, cost-effectiveness of alternative systems and the development of sustainable transport technologies have been addressed in part. In big cities, steps have been taken to establish mass transport systems. For the reduction of air pollution from transport, Turkey intends to follow the developments in the European Union. In 1995, production of cars equipped with catalytic converters was initiated with a protocol between the Ministry of Environment and car manufacturers.

With regard to achieving sustainable energy development and efficiency, the Government considers the development and use of safe technologies, promotion of R&D relating to appropriate methodologies, public awareness-raising, product labeling, and EIA as the most important means.

To reduce harmful emissions into the atmosphere from industrial activities, industries are encouraged to develop safe technologies. The Government gives high priority to the promotion of R&D relating to appropriate methodologies, EIA within industry as a whole, life-cycle analysis of products and eco-audits.

Concerning the phase-out of CFCs and other ozone depleting substances, the phase-out of Annex A and Annex B substances is planned to be completed by the year 2000.

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of Environment is primarily responsible for decision-making under this chapter. The Ministry of Health is responsible for transboundary atmospheric pollution control. The Air Quality Control Regulation, which entered into force in 1986, has not been revised in the light of Agenda 21. Regulations related to industrial accidents are being planned.

2. Capacity-Building/Technology Issues: There is no national early detection system. The national capacity-building and training to perform observations and assessments is not adequate. The Government provides training in the area of transboundary atmospheric pollution control.

3. Major Groups: NGOs have contributed to the activities under the programme area "scientific basis for decision-making". The private sector has contributed to the activities under the programme area "preventing stratospheric ozone depletion".

4. Finance: In 1995, Turkey contributed US$ 36,912 to the Vienna/Montreal trust funds. In 1994, Turkey received US$ 6,165,000 for the implementation of ozone-related activities. An agreement on financial assistance of US$ 14 million through the World Bank is underway. Two projects where the implementing agency is UNIDO have already been approved by ExCom together with a financing level of about US$ 2 Million.

5. Regional/International Cooperation: Turkey participates in the Cooperative Programme for the Monitoring and Evolution of Long Range Transmission Air Pollutants in Europe (EMEP), and in the Global Ozone Observing System.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 1995
CO_2 emissions (eq. million tons)	76	137	153
SO_x "			
NO_x "		0.033	
CH_4 "		1.253	
Consumption of ozone depleting substances (Tons)			6847*
Expenditure on air pollution abatement in US$ equivalents (million)			

Other data

Main sources of CO_2 : energy (90%), industry (6%), forestry (4%)

NOx : energy (70%), agriculture (30%)

CH_4 : agriculture (70%), industry/energy (20%), coal mining (10%)

Due to lack of infrastructure, Turkey does not participate in the Global Climate Observing System. Turkey participates in the Global Ozone Observing System.

* while 1995 consumption is 6,847 tons, it is 4,613 ODP tons.

AGENDA 21 CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES

NATIONAL PRIORITY:	
STATUS REPORT: In order to develop an integrated approach to the planning and management of land resources, the Government of Turkey has developed policies and policy instruments. Planning and management systems have been improved, and public participation promoted. With regard to the advancement of scientific understanding in this field, pilot projects to test research findings have been launched and information systems have been strengthened. Turkey promotes the integration of planning and management of land resources also through regional and international cooperation.	

Cross-Sectoral Issues

1. Decision-Making Structure: The Prime Minister's State Planning Organization, the Ministry of Public Works and Settlement, the Southeastern Regional Development Agency, local governments and municipalities, the Ministry of Environment and the Ministry of Agriculture are primarily responsible for the planning and management of land resources.

The relevant legislation in this field are the Cabinet Decree No. 540 for SPO (1994), the Planning Law No. 3194 (1985), the Environment Law No. 2872 (1983), the Law of Village No. 442 (1924), the Cabinet Decree No. 338 for SRDA (1989), the Law of Municipalities No. 1580 (1930) and the Law Related to the Administrations of Greater City Municipalities No. 3030 (1984).

2. Capacity-Building/Technology Issues: The Government promotes education and training and the strengthening of technological and institutional capacity in this field.

3. Major Groups: No information.

4. Finance: No information.

5. Regional/International Cooperation: No information.

AGENDA 21 CHAPTER 11: COMBATING DEFORESTATION

NATIONAL PRIORITY:	
STATUS REPORT: Some 26 % of Turkey's surface area is covered by forests, and approximately 50% of these forests are already degraded. In addition to afforestation, erosion control and range improvement measures, the National Mobilization and Erosion Control Act was put into force in 1995. The main objective of the act is to ensure participation and contribution of all related governmental and non-governmental organizations, private sector and local people, and to provide additional financial resources for combating deforestation and erosion control activities at national level. The Ministry of Forestry has started to encourage the private sector and farmers to establish private plantations by means of new and innovative regulations. In addition, the Law on Development of Forest Villagers has entered into force, and the interest rates of the credits given to support forest villagers have been reduced. Other measures taken to combat deforestation include tree breeding activities, establishment of germ-plasma banks and in-situ and ex-situ conservation programmes. Unique and threatened forest ecosystems and the forests located within high sloppy areas are not subject to forest production. These kind of areas are classified as protected forests or protected areas. Regeneration by using clear cutting methods in large forest areas has not been implemented since 1992. Issues which have been addressed only in part so far are the following: development of public education in forestry, identification of research and information exchange linkages, using indigenous knowledge, remote sensing, EIA, carrying out investment analysis and feasibility studies, promotion of small-scale forest based industries, assessment of forest industry efficiency and promotion of ecotourism. Turkey supports the development of a legally binding instrument on management, conservation and sustainable development of all types of forests. The First Forestry Assembly was held in 1993. The decisions taken by the Assembly were being considered all important forestry activities expressed by the UNCED at Rio, 1992. In 1997, the XI World Forestry Congress was held in Turkey.	

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of Forestry (reest, in 1991) is primarily responsible for the forestry sector in Turkey. The legislation related to forestry is the Forest Law No.6831, the National Park Law No. 2873, the Hunting Law No.3167 and the Law on the Establishment and Duties of the Ministry of Forestry No.3800. The National Mobilization Law for Afforestation and Erosion Control No.4122. The Ministry of Forestry is also the responsible body for sustainable management of mountain forests.

2. Capacity-Building/Technology Issues: The number of trained staff working in the field of forestry is adequate at central planning and grass roots levels but below par at the district level. This is mainly due to the general shortage of trained staff in Turkey. More measures are needed to improve post-graduate education possibilities in forestry. All forest-related mountain development issues and forest management practices on mountain forests areas are carried out by 4 General Directorates, 27 Forest District Directorates and 280 Forest Enterprises of the Ministry of Forestry in Turkey.

3. Major Groups: All major groups are encouraged to participate in the forestry planning at different levels.

4. Finance: The share of the forestry sector in the government budget has been about 1.6% in recent years. (The budget for 1990 was US$ eq. 880 million, for 1994 US$ eq. 840 million and for 1997 US$ eq. 998 million)

5. Regional/International Cooperation: Turkey is not yet a member of the International Tropical Timber Agreement (ITTA). With regard to the development of new indicators, Turkey follows the developments under the Ministerial Conference on the Protection of Forests in Europe in this field. The FAO funded project on the development of appropriate methods for community forestry has been implemented. Turkey signed the decisions taken by the Strasbourg and Helsinki Ministerial Conferences on the Protection of Forests in Europe.

STATISTICAL DATA/INDICATORS

	1985	1990	Latest 1996
Forest Area (Km^2)	201,990	201,990	201,990
Protected forest area		6,566	31,451
Roundwood production (solid volume of roundwood without bark in mill m^3)	16,3	15,8	17,5
Deforestation rate (Km^2/annum)	-	-	-
Reforestation rate (Km^2/annum)			800
Other data			

AGENDA 21 CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

NATIONAL PRIORITY:

STATUS REPORT:

International Convention to Combat Desertification in Countries Experiencing Drought and/or Desertification

Particularly in Africa was signed in 1994. It was translated into Turkish and sent to the Ministry of Foreign Affairs on 5 March1996 to be transmitted to the Prime Minister's office. It has been negotiated by the Environment Commission and accepted on 21 November 1996. The Convention has been taken into the agenda of the Parliament of Turkey for ratification.

Additional comments relevant to this chapter: In Turkey, some 109,124 km² are deserts, and some 374,441 km² are in danger of desertification. These areas are usually inhabited. The impacts of desertification on humans include, for example, illnesses of the respiratory system as well as unemployment because the agricultural land has become useless. Desertification in Turkey is mainly caused by improper land-use, excessive grazing and fuel wood and plant collection. Moderate impacts result from improper farming and natural causes such as wind erosion and flooding.

The measures taken by the Government to combat desertification include providing early warning information to decision-makers, preparation of drought preparedness and relief schemes, and intensified soil conservation. Public awareness-raising is also considered very important. Managers and technical committees which involve representatives of related institutions and NGOs were established for the purpose of preparing a National Action Programme and the implementation of the Convention. The Managers' Committee involves specialists regarding the subject. The Technical Committee has identified the draft topics of the National Action Programme by negotiating the subject in two meetings on 18 June1996 and 05 July 1996. After that, the relevant institutions, universities and NGOs were asked to send their own studies under the determined topics by 15 August 1996. The Draft Programme was prepared by using collected information and it will be rectified by managers and technical committees.

Turkey has 77 million hectares of surface and of this, 20 million hectares are located in arid and 31 million hectares are located in semi-arid climatic regions. In addition, more than 75% of the land are prone to different levels of erosion. Taking into account huge areas affected by soil erosion, more preventive measures and additional financial resources are needed. For this reason, a mobilization for reforestation, afforestation and erosion control Act entered into force in 1995.

Erosion control and anti-desertification activities were started in 1955 by the Ministry of Forestry. Until today, some major activities carried out are as follows:

- Reforestation works; 2.5 million hectares;
- Erosion control works; 284.000 hectares;
- Range improvement works; 80.000 hectares.

The annual programme is 50,000 hectares for reforestation and 25,000 hectares for erosion control works.

Public awareness is one of the key issues for combating desertification. Some Turkish NGOs are also dealing with this subject effectively. They are supported by the Government.

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of Forestry and the General Directorate of Rural Services are mainly responsible for combating desertification in Turkey. The National Mobilization Law for Afforestation, Reforestation and Erosion Control entered into force in 1995. The Ministry of Forestry is responsible for implementing this Law.

2. Capacity-Building/Technology Issues: The number of professional staff responsible for desertification issues is not adequate (poor) at all levels of decision-making.

3. Major Groups: Major groups participate occasionally in the planning process in this field.

4. Finance: No information

5. Regional/International Cooperation: The World Bank and the Government of Turkey have financed the Eastern Anatolian Watershed Rehabilitation Project (US$ 110 million for the upper catchment of Euphrates), and the FAO and the UNDP have financed a Project on Measuring erosion and Mapping of the Mediterranean Coast (US$ 50,000). In addition to financial support, they have provided human resources.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 199	
Land affected by desertification (Km^2)				
Other data				

AGENDA 21 CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

NATIONAL PRIORITY:

STATUS REPORT: The greatest part of forest land lies within the mountain ecosystems. Nearly all forestry activities in Turkey are subject to the management of mountain development. The main problems of mountain areas are unplanned settlements, some illegal curing, over-grazing, forest fires and in some regions, damages caused by insects.

Unique, typical representative and/or threatened forest ecosystems within the mountainous areas have been established under different categories of protected areas. Such protected ecosystems are taken into account in forest management plans and no sylvicultural intervention is allowed in these areas.

In order to provide sustainable management of mountain forests, the Ministry of Forestry has started to implement some pilot projects with the support of some international organizations and in collaboration with other related organizations which are working in the same areas. One of them is the Integrated Watershed Management Project. This project has been implemented in the upper Euphrates basins (Eastern part of the country) for erosion control. The Project has also aimed at supporting farmers in order to improve their living standards in the catchment base. In the medium term, the Ministry of Forestry will arrange its regulations related to forest management plans in such a way that agricultural lands, forests, settlement areas, water resources, touristic activities and endemic and endangered species of flora and fauna are taken into account.

Turkey signed the Strasbourg Resolution 4 of the Ministerial Conference on the Protection of European Forests on Adapting the Management of Mountain Forests to New Environmental Conditions in 1990.

The National Biodiversity Strategy and Action Plan has not been completed yet. They will contain three main topics which are Step, Forestry and Wetlands Ecosystems. Mountain Ecosystems have also been included in the Forestry Ecosystems subject. After the completion of the strategy and action plan, projects and plans of Mountain Ecosystems will be developed by Turkey.

At the same time, same projects in Turkey already contain mountain ecosystems concept to some extent. For instance, the pilot project of in-situ conservation of plant genetic resources had recognized two mountain areas (Mountain Kaz and Mountain Bolkar) as a gene management zone.

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

AGENDA 21 CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

NATIONAL PRIORITY:

STATUS REPORT: Turkey is intensively affected from water erosion. Almost 90% of the land area is effected by water erosion. It is the most severe problem for agricultural areas, affecting more than 16,000,000 ha of the cultivated areas.

The following control practices and some instituional measures should be taken against water erosion in agricultural areas: contour farming, stuble mulch tillage, rotation practices, strip cropping, terracing, grassed waterways, setting up of an organization (similar to the Soil Conservation Service in USA) etc.

The distribution of erosion areas in Turkey

Erosion degree	ha	%
0 None	5,166,627	6.64
1 Slightly	5,611,892	7.22
2 Moderate	15,592,750	20.04
3 Severe	28,334,933	36.42
4 Very severe	17,366,463	22.32
Rock surface	2,930,933	3.77
Wind Erosion	839,630	1.08
Others	2,790,994	3.59

Cross-Sectoral Issues

1. **Decision-Making Structure:** The General Directorate of Rural Services is mainly responsible for agriculture and rural development in Turkey.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

	1985	1990	Latest 1995
Agricultural land (Km^2)	364,300	364,100	265,465
Agricultural land as % of total land area	46.7	46.7	34.1
Agricultural land per capita	7,252	6,490	4,740
	1989/90	**1992/93**	**Latest 1995**
Consumption of fertilizers per Km^2 of agricultural land as of 1990	4,938	5,294	16,522
Total population	50,664,458	56,743,035	
Agricultural population	12,118,533	12,547,796	
Agricultural land (m^2 per capita)	22,900	22,100	

AGENDA 21 CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

NATIONAL PRIORITY:

STATUS REPORT:

Convention on Biological Diversity ratified in 1996.

Convention on International Trade in Endangered Species of Wild Fauna and Flora has been ratified in 1994.

Additional comments relevant to this chapter: Turkey is rich in terms of biodiversity. There are 250 wetlands with a total area of approx. one million hectares. More than 420 species of native and migratory birds nest there, and 9,000 plant species of which 3,000 are endemic, have been recorded in the various regions of the Country.

Turkey has carried out a comprehensive baseline survey on the state of the biodiversity. Habitat destruction is the most serious cause of the loss of flora and fauna. Over-harvesting and pollution cause moderate losses. In addition, moderate fauna losses result from forest fires, and moderate flora losses, from urbanization.

The Global Environment Fund (GEF) has financed an In-Situ Conservation of Genetic Biodiversity Project in Turkey. This five-year project, with the total costs of US$ 5.7 million, began in 1993, and it will identify and establish in-situ conservation areas for the protection of genetic resources and wild relatives of important crops and forest tree species not indigenous in Turkey. The project components include site surveys and inventories, gene management zones, data management, adopting a three-year national plan, and institutional strengthening.

Since 1993, the GEF has also financed a project for the Environmental Management and Protection of the Black Sea (BSEP) (total costs US$ 32.60 million). The BSEP Programme has three primary objectives: (1) to strengthen and create regional capacities for managing the Black Sea ecosystem; (2) to develop and implement an appropriate policy and legal framework for the assessment, control and prevention of pollution and the maintenance and enhancement of biodiversity; and (3) to facilitate the preparation of sound environmental issues. The Programme Coordination Unit was established in Istanbul in 1994. The project is to run for three years

The conservation of biological diversity in Turkey is provided by decisions of the Central Hunting Commission for animals, birds and reptiles, and by the establishment of protected areas such as national parks, nature reserves, nature parks, wildlife reserves and specially protected areas. The National Parks Law, the Hunting Law, the Forest Law and the Environment Law are the main legal instruments for this issue.

For the conservation and enhancement of biological diversity, natural regeneration remains the preferred method of regeneration in the forest ecosystems in Turkey. The establishment and conservation of forest-related species diversity are assisted by the sylvicultural techniques practiced under the management plans and programmes. In this context, the preservation of taxa which are naturally associated with those occurring most frequently in the forests are encouraged. In order to maintain genetic diversity, monoculture is avoided and local provenance are preferred in afforestation works. Biological control methods are encouraged for combating insects in forests.

A National Environmental Action Plan and a related Biological Action Plan have been prepared and submitted to relevant Ministries for approval. A National Biodiversity Strategy and Action Plan are under preparation by the coordination of State Planning Organization with the financial support of the World Bank and technical support of the Ministry of Environment. The Strategy and Action Plan contain three main topics which are Stepp Ecosystems, Forestry Ecosystems and Wetlands Ecosystems.

Turkey has signed and approved the decisions taken by the Helsinki Ministerial Conference on the Protection of Forests in Europe which includes a resolution on the Conservation of Biodiversity of European Forests.

A National Scientific Committee on the conservation of natural resources was established in 1995. This committee aims at supporting activities on research, inventory, extension, protection and sustainable use of biodiversity, and at providing better co-ordination among universities, governmental and non-governmental organizations and the private sector. This committee comprises representatives of universities and related governmental and non-governmental organizations.

In 1994, five Turkish wetland sites (Goksu Delta, Seyfe Lake, Burdur Lake, Kus-Manyas Lake and Sultan Marshes) were included into the Ramsar wetlands List and Turkey became the 83rd contracting party of the convention.

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of Environment, the Ministry of Forestry and the Ministry of Agriculture and Rural Affairs are responsible for the decision-making regarding the conservation of biological diversity and genetic resources. An Inter-Ministerial Steering Committee has been set up to coordinate national actions under the GEF In Situ Conservation of Genetic Biodiversity Project, including approving criteria for selection of gene management zones, reviewing surveys and inventory studies, setting priorities for training and approving the budget.

2. Capacity-Building/Technology Issues: A training programme has been established under the GEF In-Situ Conservation of Genetic Biodiversity Project.

3. Major Groups: No information.

4. Finance: The GEF, UNDP and the World Bank have financed some in situ and ex situ projects as well as the IUCN, Plant Genetic Resources Research Institute, and the WWF.

5. Regional/International Cooperation: See status report.

STATISTICAL DATA/INDICATORS

	1992	Latest 199	
Protected area as % of total land area	0.3		
	1990	**Latest 199**	
Number of threatened species	1,973		
Other data			

AGENDA 21 CHAPTER 16: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY

NATIONAL PRIORITY:

STATUS REPORT: There are no specific policies or plans to promote the use of biotechnology in Turkey. The most significant projects in the field have been the following:

- Biotechnology Techniques in Turkey by the TUBITAK Marmara Research Center, Research Institute for Genetic Engineering and Biotechnology (US$1.2 million) with the support of the NATO Science for Stability (SFS) Programme (US$950,000);

- The Establishment of Hybridoma, Recombinant DNA and transfer Technologies at TUBITAK Gebze by the TUBITAK Marmara Research Center, Research Institute for Genetic Engineering and Biotechnology (US$430,000) with the support of the UNDP and UNIDO (US$188,000);

- The Establishment of a Molecular Biology Laboratory by the Bogazici University, Department of Biology (US$310,000) with the support of the UNDP and UNESCO (US$268,000).

Cross-Sectoral Issues

1. **Decision-Making Structure:** The TUBITAK-MAM Research Institute for Genetic Engineering and Biotechnology and Ankara University Biotechnological and Implementation Centre are mainly responsible for biotechnology research and development in Turkey.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

AGENDA 21 CHAPTER 17: **PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES**

NATIONAL PRIORITY:

STATUS REPORT:

The UN Convention on the Law of the Sea Turkey is not a party to the UN Convention of the Law of the Sea. Articles of the convention are taken into consideration to the extent that they reflect customary international law.

See also the attached tables on the next pages.

Turkey has a national policy on oceans. The establishment of an integrated coastal area management programme, encompassing the EEZ in the Black Sea, is planned.

Turkey played a leadership role in launching an international environmental programme for the Black Sea Region in 1993. The Global Environment Facility (UNDP) has financed this Environmental Management and Protection of the Black Sea (BSEP) project (total costs US$32.60 million), which has three primary objectives: (1) to strengthen and create regional capacities for managing the Black Sea ecosystem; (2) to develop and implement an appropriate policy and legal framework for the assessment, control and prevention of pollution and the maintenance and enhancement of biodiversity; and (3) to facilitate the preparation of sound environmental issues. The Programme Coordination Unit was established in Istanbul in 1994. It is assisted by a pollution monitoring network involving universities and other public institutions. The project is to run for three years.

International support is needed in terms of monitoring, technical and financial support for the inventory of pollution from land-based sources and for the control of all kinds of waste from maritime transport, combating oil spills at sea and in ports, and for contingency plans in case of accidents at sea.

With regard to the sustainable use and conservation of marine living resources of the high seas, Turkey attaches vital importance to the UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and plans to take into consideration the principles set by the Conference. Turkey also considers the FAO Code of Conduct of Responsible Fishing an important development for the sustainable use and conservation of marine living resources under national jurisdiction and plans to develop national policies in harmony with the Code.

Comprehensive assessment of the state of the environment of coastal and marine areas are carried out frequently.

Studies have been started to protect the coastal areas which consist of endangered marine turtles and their nesting areas, in Mediterranean coastal zone. These species are also protected by the international arrangements in which Turkey takes part. The Convention on the Conservation of European Wildlife and Natural Habitat, also known as the Bern Convention, entered into force in Turkey in 1984 and placed the Government under the obligation of protecting the sea turtles as well as their breeding and nesting grounds along the Mediterranean Coastal System. In addition, these species are protected by the Barcelona Convention under which an action plan has been adopted for the protection of the sea turtles. Within the framework of these conventions, in 1990, the Marine Turtles Monitoring Commission was set up under the coordination of the Ministry of Environment in order to conserve the marine turtles in Turkish Mediterranean coasts. The Environment Management Plan has been designed for the same important coastal areas for marine turtles.

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of Environment, the Ministry of Human Settlements, the Ministry of Tourism and local authorities are responsible for decision-making under this chapter. The Under-Secretariat for Maritime Affairs is the operational focal point of REMPEC and the national focal point of the Emergency Response Activity Center of the BSEP.

2. Capacity-Building/Technology Issues: National databases contain information on the periodic measurements of main pollutant parameters at sea, on goods transported by sea, a register of ships and seafarers, information on the ship accidents and ports, activities in the coastal areas, and on the marine degradation caused by sea based activities. Turkey has access to technology to identify the major types of pollution from the land-based sources within the framework of the Med-Pol, the BSEP and METAO projects.

3. Major Groups: No information.

4. Finance: See status report.

5. Regional/International Cooperation: Turkey participates in the following international scientific programmes: The Black Sea International Oceanographic Research Programme COMSBLACK (with the Intergovernmental Oceanographic Research Programme POEM BC (with IOC); Modeling for Black Sea Ecosystem TU-BLACK SEA; The Regional Cooperation Programme of Oceanography Institutes in the Black Sea (with NATO); Monitoring of Selected Trace for Transportation and Flux Modeling in the Black Sea (with IAEA); The Comparative Assessment Programme for Primary Production, Transportation and Coastal-High Sea Interaction in Accordance with Sea Wifs and CZCS Data (with NATO). MARPOL 73/78 and its annexes I, II and V have been found difficult to implement. Turkey also participates in the development of socio-economic and environmental indicators, systematic observation systems, the Global Ocean Observing System, and in the mussel watch programme, but not in clearing-houses. See also Status Report.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 199-	
Catches of marine species (metric tons)	392,196	297,123	453,123	
Population in coastal areas	21.97	28.75		
Population served by waste water treatment (% of country's total population)	0.07	2.16	6.31	
Discharges of oil into coastal waters (metric tons)				
Releases of phosphate into coastal waters (metric tons)				
Releases of nitrate into coastal waters (metric tons)				

Chapter 17 (Oceans) Continued:

Check the boxes in the column below left:

For level of importance use:

*** = very important

** = important

* = not important

N = not relevant

Check the boxes in the column below right:

For level of implementation use:

*** = fully covered

** = well covered - gaps being addressed

* = poorly covered

O = not covered

N = not relevant

TABLE I. THE FOLLOWING ACTIVITIES HAVE BEEN CONSIDERED BY THE APPROPRIATE COORDINATING MECHANISM FOR INTEGRATED MANAGEMENT AND SUSTAINABLE DEVELOPMENT OF COASTAL AND MARINE AREAS AND THEIR RESOURCES.

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
**	a. Preparation and implementation of land and water use and siting policies.	**
**	b. Implementation of integrated coastal and marine management and sustainable development plans and programmes at appropriate levels.	**
**	c. Preparation of coastal profiles identifying critical areas including eroded zones, physical processes, development patterns, user conflicts and specific priorities for management.	*
**	d. Prior environmental impact assessment, systematic observation and follow-up of major projects, including systematic incorporation of results in decision-making.	**
**	e. Contingency plans for human induced and natural disasters.	*
***	f. Improvement of coastal human settlements, especially in housing, drinking water and treatment and disposal of sewage, solid wastes and industrial effluents.	**
	g. Periodic assessment of the impacts of external factors and phenomena to ensure that the objectives of integrated management and sustainable development of coastal areas and marine environment are met.	
	h. Conservation and restoration of altered critical habitats.	
***	I. Integration of sectoral programmes on sustainable development for settlements, agriculture, tourism, fishing, ports and industries affecting the coastal areas.	*
***	J. Infrastructure adaptation and alternative employment.	*
***	K. Human resource development and training.	*
***	L. Public education, awareness and information programmes.	*
***	M. Promoting environmentally sound technology and sustainable practices.	**
	N. Development and simultaneous implementation of environmental quality criteria.	

TABLE II. TECHNOLOGY (MARINE ENVIRONMENT)

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
**	A. Apply preventive, precautionary and anticipatory approaches so as to avoid degradation of the marine environment, as well as to reduce the risk of long-term or irreversible adverse effects upon it.	*
***	B. Ensure prior assessment of activities that may have significant adverse impacts upon the marine environment.	**
**	C. Integrate protection of the marine environment into relevant general environmental, social and economic development policies.	**
**	D. Develop economic incentives, where appropriate, to apply clean technologies and other means consistent with the internalization of environmental costs, such as the polluter pays principle, so as to avoid degradation of the marine environment.	**
**	E. Improve the living standards of coastal populations, particularly in developing countries, so as to contribute to reducing the degradation of the coastal and marine environment.	*
***	F. Effective monitoring and surveillance within the exclusive economic zone (EEZ) of fish harvesting and transportation of toxic and other hazardous materials.	

TABLE III. SEWAGE RELATED ISSUES

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
**	A. Sewage related problems are considered when formulating or reviewing coastal development plans, including human development plans.	**
***	B. Sewage treatment facilities are built in accordance with national policies.	*
**	C. Coastal outfalls are located so as to maintain acceptable level of environmental quality and to avoid exposing shell fisheries, water intakes and bathing areas to pathogens.	**
***	D. The Government promotes primary treatment of municipal sewage discharged to rivers, estuaries and the sea, or other solutions appropriate to specific sites.	*
***	E. The Government supports the establishment and improvement of local, national, subregional and regional, as necessary, regulatory and monitoring programmes to control effluent discharge. Minimum sewage effluent guidelines and water quality criteria are in use.	**

TABLE IV. OTHER SOURCES OF MARINE POLLUTION, THE GOVERNMENT HAS:

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
***	A. Established or improved upon, as necessary, regulatory and monitoring programmes to control emissions, including recycling technologies.	**
**	B. Promoted risk and environmental impact assessments to help ensure an acceptable level of environmental quality.	**
**	C. Promoted assessment and cooperation at the regional level, where appropriate, with respect to the input of point source pollutants from the marine environment.	**
**	D. Taken steps to eliminate emissions or discharges of organohalogen compounds from the marine environment.	*
**	E. Taken steps to eliminate/reduce emissions or discharges or other synthetic organic compounds from the marine environment.	*
**	F. Promoted controls over anthropogenic inputs of nitrogen and phosphorous that enter coastal waters where such problems as eutrophication threaten the marine environment or its resources.	**
**	G. Taken steps to develop and implement environmentally sound land-use techniques and practices to reduce run-off to water courses and estuaries which would cause pollution or degradation of the marine environment.	**
**	H. Promoted the use of environmentally less harmful pesticides and fertilizers and alternative methods for pest control, and considered the prohibition of those found to be environmentally unsound.	*
**	I. Adopted new initiatives at national, subregional and regional levels for controlling the input of non-point source pollutants which require broad changes in sewage and waste management, agricultural practices, mining, construction and transportation.	**
**	J. Taken steps to control and prevent coastal erosion and siltation due to anthropogenic factors related to, inter alia, land-use and construction techniques and practices.	*

TABLE V. ADDRESSING CRITICAL UNCERTAINTIES FOR THE MANAGEMENT OF THE MARINE ENVIRONMENT AND CLIMATE CHANGE. IN ORDER TO IMPLEMENT THIS PROGRAMME AREA THE GOVERNMENT IS CARRYING OUT THE FOLLOWING ACTIVITIES:

LEVEL OF IMPORTANCE	ACTIVITY AS DESCRIBED IN AGENDA 21	LEVEL OF IMPLEMENTATION
	A. Coordinating national and regional observation programmes for coastal and near-shore phenomena related to climate change and for research parameters essential for marine and coastal management in all regions.	
	B. Providing improved forecasts of marine conditions for the safety of inhabitants of coastal areas and for the efficiency of marine operations.	
	C. Adopting special measures to cope with and adapt to potential climate change and sea-level rise.	
	D. Participating in coastal vulnerability assessment, modelling and response strategies particularly for priority areas, such as small islands and low-lying and critical coastal areas.	
**	E. Identifying ongoing and planned programmes of systematic observation of the marine environment, with a view to integrating activities and establishing priorities to address critical uncertainties for oceans and all seas.	**
	F. Research to determine the marine biological effects of increased levels of ultraviolet rays due to the depletion of the stratospheric ozone layer.	
	G. Carrying out analysis, assessments and systematic observation of the role of oceans as a carbon sink.	

AGENDA 21 CHAPTER 18: **PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES**

NATIONAL PRIORITY:

STATUS REPORT: The total amount of usable water is estimated to be 111 billion m3/year or 47 % of total resources. Major sources of pollution are domestic and industrial wastewater discharges and agricultural run off. Approximately 70 % of the population is adequately served, while 7 % of the population has no continuous supply. Water quality is monitored throughout Turkey by local health inspectors within a national programme. Inspectors have the authority to prosecute polluters with a broad range of regulations until the contamination is eliminated.

Drinking water resource management is the most important subject for sustainable development. For this reason a project titled as "Protection Sapanca Lake as a Drinking Water Resource" was implemented by the Ministry of Environment. The philosophy of the project was integrated management of potable water resources and beneficial use and protection of the basin. On the basis of the project, a plan was prepared for the beneficial use and protection of the basin and presented as 1/25,000 scale maps. These maps, which included land use limitation criteria, will be used by land use planners during the preparation of a 1/25,000 scale basic land use plan.

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 199-	
Fresh water availability (total domestic/external in million m^3)				
Annual withdrawal of freshwater as % of available water	18			
Other data				

AGENDA 21 CHAPTER 19: **ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS**

NATIONAL PRIORITY:	
STATUS REPORT: No information.	

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

AGENDA 21 CHAPTER 20: **ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN HAZARDOUS WASTES**

NATIONAL PRIORITY:

STATUS REPORT:

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

was signed in 1989 and ratified in 1994.

Additional comments relevant to this chapter Turkey signed the Basel Convention in 1989 and the Convention entered into force on 20 September 1994. On the basis of the Convention a national Hazardous Waste Management Regulation was prepared and published in the Official Paper of 27 August 1995 (No. 22387).

According to this regulation the import of all kinds of hazardous waste to Turkey is prohibited. In this context, the import of waste scraps which have economic value for some important industrial sectors and used textiles are being controlled in accordance with the "Notice on Substances Controlled for the Purpose of Protecting the Environment". This notice was published in the Official Paper on 1 February 1996.

After the ratification of the Basel Convention, the notification system was applied for the export of hazardous wastes for recovery and recycling. According to the notification forms, it was concluded that 450 ton of anode slime, 250 ton of x-ray and photographic film containing silver base PET/CTA, 55 ton of Cu-Anode slimes and 30 ton of PCB transformers have been exported since 1994.

In addition, the Protocol on the prevention and pollution of the Mediterranean Sea by transboundary movements of hazardous wastes and their disposal was signed on 1 October 1996.

Cross-Sectoral Issues

1. Decision-Making Structure: The Ministry of Environment is the Competent Authority of the Basel Convention, and it promotes policies and programmes in the area of sound management of hazardous wastes.

2. Capacity-Building/Technology Issues:

3. Major Groups: No information.

4. Finance: Turkey contributed to the Basel Trust Fund US$1,882 in 1994; US$ 10,050.00 in 1995, and US$11,609.00 in 1996.

5. Regional/International Cooperation: No information.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 1994-96	
Generation of hazardous waste (t)				
Import of hazardous wastes (t)				
Export of hazardous wastes (t)			785	
Area of land contaminated by hazardous waste (km^2)				
Expenditure on hazardous waste treatment (US$)				
Other data				

AGENDA 21 CHAPTER 21: ENVIRONMENTALLY SOUND MANAGEMENT OF SOLID WASTES AND SEWAGE-RELATED ISSUES

NATIONAL PRIORITY:

STATUS REPORT: Rapid growth of the urban population is leading to uncontrolled wastewater generation and pollution loads. Solid waste production in Turkey amounts to 61,137 tons/day in 1,974 municipalities. About one per cent of this waste is deposited in a sanitary landfill, 1.71% is composted, approximately 81% is dumped into the municipal dumping sites, and approximately 16% is dumped into water bodies. The industrial solid waste production is estimated to be 5,379,000 tons per year.

Out of 34 million people living in urban areas, only 6% are served with proper treatment facilities. Istanbul, Ankara and Izmir have begun sewage treatment projects by establishing a collection system in each city and building waste treatment plants.

New industrial waste regulations have been approved. Industrial wastewater is of much importance due to high loads and toxic nature. Only 20% of the industries have proper treatment facilities.

In Turkey the Regulation on Control of Solid Waste Management was published in the Official Paper dated 14 March 1991 (No. 20814). According to this regulation the municipalities are responsible for the collection, transportation, recycling and disposal of solid waste.

Deposit schemes and recycling rates are being applied effectively on packaging waste, and rates of up to 65 % are being achieved.

Since 1995, theWorld Bank in conjunction with the Ministry of Environment has financed the Mediterranean Environmental Technical Assistance Programme (METAP) for developing a national solid waste management throughout Turkey. The objectives of the project are

- to take a broad view of Turkish solid waste management institutions, policies and systems for administration and control;

- to identify barriers and constraints to successful implementation of solid waste management; and

- to propose strategies for removing those barriers and constraints in order to achieve consistent and improved practices and standards.

Cross-Sectoral Issues

1. **Decision-Making Structure:** The Ministry of Environment promotes policies and programmes in the area of solid waste management.
2. **Capacity-Building/Technology Issues:** No information.
3. **Major Groups:** No information.
4. **Finance:** No information.
5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

	1980	1990	Latest 199-	
Generation of industrial and municipal waste (t)				
Waste disposed(Kg/capita)				
Expenditure on waste collection and treatment (US$)				
Waste recycling rates (%)				
Municipal waste disposal (Kg/capita)				
Waste reduction rates per unit of GDP (t/year)				
Other data				

AGENDA 21 CHAPTER 22: SAFE AND ENVIRONMENTALLY SOUND MANAGEMENT OF RADIOACTIVE WASTES

NATIONAL PRIORITY:

STATUS REPORT: No information.

Cross-Sectoral Issues

1. **Decision-Making Structure:** No information.

2. **Capacity-Building/Technology Issues:** No information.

3. **Major Groups:** No information.

4. **Finance:** No information.

5. **Regional/International Cooperation:** No information.

STATISTICAL DATA/INDICATORS

TURKEY

AGENDA 21 CHAPTERS 23-32: MAJOR GROUPS

The role of major groups are also covered under the various chapters of Agenda 21. The following is a summary of main objectives outlined in Agenda 21. Please check the appropriate boxes and describe briefly any important steps or obstacles.

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS	
Ch. 24: GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT. **The Convention on the Elimination of All Forms of Discrimination Against Women was ratified on 20 December 1985.** **24.a** Increasing the proportion of women decision makers. No information. **24.b** assessing, reviewing, revising and implementing curricula and other educational material with a view to promoting dissemination of gender-relevant knowledge. Curricula and educational material. **24.c and 24.d** formulating and implementing policies, guidelines, strategies and plans for achievement of equality in all aspects of society including issuing a strategy by year 2000 to eliminate obstacles to full participation of women in sustainable development. Policies/strategies etc. **24.e** establishing mechanisms by 1995 to assess implementation and impact of development and environment policies and programmes on women. No information. **Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):** In recent years, the Government of Turkey, in particular the State Ministry for Women, has pursued strengthening the national institutional machinery for the advancement of women.	

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 25: CHILDREN AND YOUTH IN SUSTAINABLE DEVELOPMENT.

25.a establishing processes that promote dialogue between the youth and government at all levels and mechanisms that permit youth access to information and opportunity to present their views on implementing A21.

No information.

Describe their role in the national process:

25.b reducing youth unemployment

No information.

25.c ensuring that by year 2000 more than 50% of youth -- gender balanced -- have access to appropriate secondary education or vocational training.

No information.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

No information.

Ch. 26: RECOGNIZING AND STRENGTHENING THE ROLE OF INDIGENOUS PEOPLE AND THEIR COMMUNITIES.

26.a establishing a process to empower indigenous people and their communities -- through policies and legal instruments:

No information.

26.b strengthening arrangements for active participation in national policies

No information.

26.c involving indigenous people in resource management strategies and programmes at the national and local level.

No information.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

No information.

Ch. 27: STRENGTHENING THE ROLE OF NON-GOVERNMENTAL ORGANIZATIONS: PARTNERS FOR SUSTAINABLE DEVELOPMENT.

27.a developing mechanisms that allow NGOs to play their partnership role responsibly and effectively.

No information.

27.b reviewing formal procedures and mechanisms to involve NGOs in decision making and implementation.

No information.

27.c promoting and allowing NGOs to participate in the conception, establishment and evaluation of official mechanisms to review Agenda 21 implementation.

No information.

27.d establishing a mutually productive dialogue by 1995 at the national level between NGOs and governments.

No information.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

No information.

Ch. 28: LOCAL AUTHORITIES' INITIATIVES IN SUPPORT OF AGENDA 21.

28.a encouraging local authorities to implement and monitor programmes that aim to ensure participation of women and youth in local decision making.

No information.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

No information.

Ch. 29: STRENGTHENING THE ROLE OF WORKERS AND THEIR TRADE UNIONS.

29.a full participation of workers in implementation and evaluation of A21.

29.b (By year 2000, (a) promoting ratification of ILO conventions; (b) establishing bipartite and tripartite mechanism on safety, health and sustainable development; (c) increasing number of environmental collective agreements; (d) reducing occupational accidents and injuries; (e) increasing workers' education and training efforts.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

No information.

30: STRENGTHENING THE ROLE OF BUSINESS AND INDUSTRY.

30.a increasing the efficiency of resource use, including reuse, recycling, and reduction of waste per unit of economic output.

30.b encouraging the concept of stewardship in management and use of natural resources by entrepreneurs.

List any actions taken in this area:

No information.

30.c increasing number of enterprises that subscribe to and implement sustainable development policies.

No information.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

No information.

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 31: SCIENTIFIC AND TECHNOLOGICAL COMMUNITY.

31.a improving exchange of knowledge and concerns between s&t community and the general public.

Scientific community has already established ways in which to address the general public and deal with sustainable development.

31.b developing, improving and promoting international acceptance of codes of practice and guidelines related to science and technology and its role in reconciling environment and development.

No information.

Brief comments on this chapter not already described in chapter 35 (maximum 100 words) (please, do not exceed this page):

No information.

STATUS REPORT ON PARTICIPATION BY MAJOR GROUPS AT THE NATIONAL AND LOCAL LEVELS

Ch. 32: STRENGTHENING THE ROLE OF FARMERS.

32.a promoting and encouraging sustainable farming practices and technologies.

32.b developing a policy framework that provides incentives and motivation among farmers for sustainable and efficient farming practices.

32.c enhancing participation of organizations of farmers in design and implementation of sustainable development policies.

Brief comments on this chapter (maximum 100 words) (please, do not exceed this page):

No information.

AGENDA 21 CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

Financial resources and mechanisms are also covered under each sectoral chapter of Agenda 21 where relevant. This summary highlights broader national financial policies, domestic and external (including ODA)

NATIONAL PRIORITY:

STATUS REPORT:

THE DECREE CONCERNING STATE AIDS FOR INVESTMENTS AND RELATING COMMUNIQUE STATE AIDS

Environmental Protection Investments Granted by Incentive Certificates

A loan facility of 50% of the total fixed amount of investments may be granted from the Fund sources within the scope of the principles set forth herein on the portion of the investments for the protection of the environment within the scope of an Evaluation of Environmental Effects Report for,

a) Existing investments located in developed regions (Provinces of Istanbul and Kocaeli and areas within the boundaries of the Greater Municipality of Ankara, Izmir, Bursa and Adana); and

b) Existing investments or investments to be realized in other regions by Municipalities, Provincial Private Administrations, enterprising committees of Organized Industrial Zones or relevant companies.

NEW ECONOMIC INSTRUMENTS: No information.

ELIMINATION OF ENVIRONMENTALLY UNFRIENDLY SUBSIDIES: No information.

ODA policy issues

STATISTICAL DATA/INDICATORS						
	1992	1993	1994	1995	1996	
ODA funding provided or received (Total US$million)						
	Average for 92-93		Average for 94-96			
Net flow of external capital from all sources as % of GDP						

Other data

AGENDA 21 CHAPTER 34: TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING

Transfer of environmentally sound technology, cooperation and capacity-building is also covered under each sectoral chapter of Agenda 21 where relevant. This summary highlights broader national policies and actions relating to chapter 34.

NATIONAL PRIORITY:

STATUS REPORT ON LINKS BETWEEN NATIONAL, REGIONAL AND INTERNATIONAL INFORMATION NETWORKS/SYSTEMS:

Information on ESTs can be found through the Internet, books and periodicals in Turkey. It is sometimes difficult to find information on different types of ESTs and their application in different sectors. A Working Group on EST has been established to prepare for the establishment of an EST centre in Turkey.

A project to eliminate the use of CFCs and halons consistent with the Montreal Protocol is an example of the concrete measures taken to include ESTs as an integral part of technology cooperation and technical assistance programmes. The Black Sea Economic Cooperation Programme and the EUREKA Programme have been introduced to integrate the economies in transition into technology cooperation.

MEANS OF IMPLEMENTATION: No information.

• Describe any work being undertaken at the national or local level regarding efforts to promote clean production processes and/or the concepts of eco-efficiency. These processes may include training, preferential financial arrangements, information dissemination and changes in legal or regulatory frameworks.

No information.

• Provide information on the adoption of environmental management systems. National reaction to environmental management system standards such as the ISO 14000 Series and others. Please note efforts made at the national level to promote their adoption and the creation of certification infrastructure in order to facilitate access to these standards to local industry.

No information.

• List and describe programs or work under way to facilitate the transfer of ESTs to small and medium sized enterprises. Please note efforts to facilitate access to financial resources and other transfer strategies.

No information.

AGENDA 21 CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

NATIONAL PRIORITY:

STATUS REPORT ON NATIONAL SCIENTIFIC KNOWLEDGE, RESEARCH NEEDS AND PRIORITIES:

In 1995, there were no plans to revise the legislation and national policies regarding information for decision-making to better meet the objectives of Agenda 21.

STEPS TAKEN TO ENHANCE SCIENTIFIC UNDERSTANDING, IMPROVE LONG TERM SCIENTIFIC ASSESSMENT, BUILDING OF CAPACITY AND CAPABILITY:

No information.

STATISTICAL DATA/INDICATORS

		Year	
Number of scientists, engineers and technicians engaged in research and experimental development	#	19--	
Total expenditure for research and experimental development (US$eq.)	$	19--	
Other data			

AGENDA 21 CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

NATIONAL PRIORITY:

STATUS REPORT: Education in Turkey is beset by serious problems, and the major factor underlying the shortfalls is the high population growth. Of Turkey's total labour force, some 78% have primary education or less; about 7% have graduated from junior high school; 9.7% from high school, and only 5.2% are university graduates. The total student enrollment in the 1992-1993 school year was 12,186,619 of which 6,956,810 (57,696) were males and 5,229,809 (45.4%) were females.

Turkey has no national strategy on education yet, but the Ministry of Education and the Education and Publication Department of the Ministry of Environment, which are responsible for education on sustainable development, are preparing one. They also undertake measures to encourage partnerships, mobilize resources, provide information, and assess the needs of different population groups. For example, they have initiated various public awareness-raising campaigns and competitions between schools and organized a number of meetings, panel discussions and symposia on the issue. In addition, the Education and Publication Department of the Ministry of the Environment has prepared TV firms, theater plays, and newspaper and billboard advertisements.

a) Reorientation of education towards sustainable development

The Institutional and Training Council of the Ministry of Education is responsible for the preparation of curricula. The curricula at the primary school level have been revised to better address environment and development as a cross-cutting issue. Measures are being taken to revise the curricula at the college and university level. In 1995, there were no plans to review the curricula at the secondary school level and in vocational schools.

Environmental issues are usually taught by using printed material and by organizing special classes on the topic. Schools and universities have access to different databases in the field of sustainable development through the Internet.

b) Increasing public awareness : See status report

c) Promoting training

Turkey was planning to start a training programme for teachers in 1995.

ROLE OF MAJOR GROUPS:

NGOs and local authorities play an important role by organizing various information campaigns and other activities to raise public-awareness on sustainable development

FINANCING AND COST EVALUATION OF THE LABOUR ACTIVITIES: No information.

STATISTICAL DATA/INDICATORS				
	1980	1990	Latest 199-	
Adult literacy rate (%) Male		89.9		
Adult literacy rate (%) Female		68.5		
% of primary school children reaching grade 5 (1986-97)		92.0		
Mean number of years of schooling				
% of GNP spent on education	2.8	3.1		
Females per 100 males in secondary school		58.7		
Women per 100 men in the labour force				
Other data				

AGENDA 21 CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES

National capacity building is also covered under sectoral chapters.

Donors: You may wish to describe here how Agenda 21 has influenced your ODA policies in this area.

Developing countries: You may wish to describe any new national mechanisms for capacity building - and any changes in technical cooperation.

NATIONAL PRIORITY:

STATUS REPORT ON NATIONAL ENDOGENOUS CAPACITY BUILDING:

Local Agenda 21 for Urla - located within the close hinterland of Izmir and highly affected by the adverse environmental impacts of rapid economic development in Izmir - is a pilot initiative supported by the UNDP through the GEF/NGO Small Grants Programme providing input to the National Agenda 21 preparatory process (for more information, see Chapter 8). A local committee, involving all relevant stakeholders, has been established for the preparation of Urla Local Agenda 21 .

AGENDA 21 CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

Ch. 38: Brief summary of any particular UN System response affecting this country/state:

No information.

AGENDA 21 CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

Ch. 39: International Legal Instruments are covered under the relevant sectoral chapters. This is a listing of major agreements/conventions (not already covered) entered into and relevant to Agenda 21:

No information.

AGENDA 21 CHAPTER 40: INFORMATION FOR DECISION-MAKING

This chapter is also covered under sectoral and other chapters of this profile. The matrix below gives an overview of how national authorities rate the available information for decision making.

Rating of available data and information suitable for decision-making

	Agenda 21 Chapters	Very good	Good	Some good data but many gaps	Poor	Remarks
2.	International cooperation and trade			X		
3.	Combating poverty		X			
4.	Changing consumption patterns				X	
5.	Demographic dynamics and sustainability			X		
6.	Human health		X			
7.	Human settlements			X		
8.	Integrating E & D in decision-making			X		
9.	Protection of the atmosphere			X		
10.	Integrated planning and management of land resources		X			
11.	Combating deforestation				X	
12.	Combating desertification and drought				X	
13.	Sustainable mountain development			X		
14.	Sustainable agriculture and rural development		X			
15.	Conservation of biological diversity			X		
16.	Biotechnology			X		
17.	Oceans, seas, coastal areas and their living resources		X			
18.	Freshwater resources		X			
19.	Toxic chemicals		X			
20.	Hazardous wastes		X			
21.	Solid wastes				X	
22.	Radioactive wastes			X		
24.	Women in sustainable development		X			
25.	Children and youth			X		
26.	Indigenous people			X		
27.	Non-governmental organizations				X	
28.	Local authorities		X			
29.	Workers and trade unions		X			
30.	Business and industry			X		
31.	Scientific and technological community			X		
32.	Farmers				X	
33.	Financial resources and mechanisms		X			
34.	Technology, cooperation and capacity-building		X			
35.	Science for sustainable development				X	
36.	Education, public awareness and training			X		
37.	International cooperation for capacity-building			X		
38.	International institutional arrangements			X		
39.	International legal instruments			X		
40.	Information for decision-making			X		

Additional Comments

The following ministries and other institutions are primarily responsible for information for the different dimensions of sustainable development:

Economic dimension:

- Agriculture (Ministry of Agriculture, State Institute of Statistics - SIS)
- Industry (State Institute of Statistics)
- Transport (Ministry of Transportation, State Institute of Statistics)
- Energy (State Institute of Statistics, Ministry of Energy and Natural Resources, Turkish Electricity Authority)
- Tourism (Ministry of Tourism, State Institute of Statistics)

Social dimension:

(State Institute of Statistics, Prime Ministry Family Research Authority).

Environmental dimension

- Atmosphere (State Institute of Statistics)
- Inland waters (State Hydraulic Works, General Directorate of Electrical Works, Study and Administration, General Directorate of Village Affairs, State Institute of Statistics)
- Marine Environment (The Scientific and Technical Research Council of Turkey), Prime Ministry Undersecretariat for Maritime
- Land resources (SIS), General Directorate of Rural Affairs
- Forests (Ministry of Forestry)
- Flora and fauna (Universities)
- Solid wastes (SIS)
- Noise abatement (Ministry of Labour and Social Security, SIS)
- Risk abatement (Ministry of Public Works and Settlement', General Directorate of Directorate Affairs)
- Radioactive wastes (Turkish Atomic Energy Authority).

In 1995, there were no plans to revise the legislation and national policies regarding information for decision-making to better meet the objectives of Agenda 21.

The Ministry of Environment is planning to cooperate with the State Planning Organization and the State Institute of Statistics to integrate environmental and developmental information in the near future. Turkey has carried out inventories of the existing databases relevant to sustainable development. Data usually collected in the field of sustainable development include information about socio-economic issues (population, urbanization, agriculture, industry, tourism, energy, transport, resource exploitation, waste management), water resources (drawoffs and use, restitution and discharge, quality and treatment), soil land-use (land-use, resources and production, salinization and erosion), and biodiversity (state of habitats - threats, evolution - protected and/or sensitive areas). Information is also collected about households, including their income-consumption expenditure, waste generation and consumption patterns.

With regard to the technological capacity for sharing information electronically, only a few computers have access to international telecommunications lines. This is due to the high costs of telecommunications and to the insufficient number of trained personnel. Concerning capabilities to access remote sensing data, the SIS has capacity to access data about the annual yield crop.

Turkey is planning to develop national indicators on sustainable development as an inter-departmental effort (Ministry of Environment, State Planning organization and State Institute of Statistics) as soon as the Turkish Environment and Development Observatory has been set up under the Mediterranean Action Plan Programme.

STATISTICAL DATA/INDICATORS				
	1980	1993	Latest 199-	
Number of telephones in use per 100 inhabitants	10.6	18.4		
Other data				